Claims

What is claimed is:

1. An auto rack rail road car comprising:
   a rail car body having a first end, a second end, and at least a first deck for carrying automobiles, said first deck extending between said first and second ends;
   said body having a door operable to control access to said rail road car;
   said door following an arcuate track between an open position and a closed position;
   said door is supported on a first roller and a second roller;
   said first and second rollers are constrained to follow concentric paths;
   said first roller has a first path radius;
   said second roller has a second path radius; and
   said first path radius is different from said second path radius.

2. The auto rack rail road car of claim 1 wherein said first and second rollers each support a portion of the weight of said door during motion of said door between said open and closed positions.

3. An auto rack rail road car comprising:
   a rail road car body having a first end, a second end, and at least a first deck for carrying automobiles, said first deck extending between said first and second ends;
   said body having a door operable to control access to said rail road car;
   said door following an arcuate path between an open position and a closed position;
   said door has a main sheet and an array of horizontal and vertical stiffeners;
   said main sheet has a first side and a second side;
   said horizontal stiffeners are mounted to said first side of said main sheet, and said vertical stiffeners are mounted to said second side of said main sheet.

4. The auto rack rail road car of claim 3 wherein at least one of said stiffeners is mounted to said main sheet with mechanical fasteners.

5. The auto rack rail road car of claim 3 wherein at least one of the vertical stiffeners is connected to at least one of the horizontal stiffeners by a mechanical fastening through the main sheet.

6. An auto rack rail road car comprising:
a rail car body having a first end, a second end, and at least a first deck for carrying automobiles, said first deck extending between said first and second ends;
said body having a radial arm door operable to control access to said rail road car;
said door following an arcuate track between an open position and a closed position;
said rail road car has a longitudinal centerline lying in a central vertical plane;
said door is supported on at least first and second rollers;
said door is mounted to move angularly through an arc centered about an axis of rotation, said axis of rotation being offset laterally from said central vertical plane; and
in said closed position said first roller being positioned closer to said central vertical plane than is said axis of rotation.

7. The auto rack rail road car of claim 6 wherein said first roller has an axis of rotation and said axis of rotation of said first roller intersects said axis of rotation of said door.

8. The auto rack rail road car of claim 6 wherein said door is a radial arm door having an arcuate portion and a tangential portion, and said first roller is mounted to said tangential portion of said door.

9. The auto rack railroad car of claim 6 wherein said first deck has a guideway and said door has a guide follower mounted to engage said guideway.

10. The auto rack rail road car of claim 9 wherein said guideway is a slot formed in said first deck, and said guide follower is a member extending downwardly from said door into said slot.

11. The auto rack rail road car of claim 20 wherein said first deck is greater than 3/4 inches in thickness.